

Abstract Submitted for the 1997 Topical Conference
on Shock Compression of Condensed Matter
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Suggested titles of sessions in
which paper should be placed:

Detonation Physics & Energetic Materials {DE}

Shock Sensitivity of LX-04 at Elevated Temperatures.*

P. A. Urtiew, C. M. Tarver, J. W. Forbes, F. Garcia, Lawrence Livermore National Laboratory.--- Hazard scenarios can involve more than one stimulus, such as heating followed by shock from fragment impact. The shock response of LX-04 (85 wt% HMX, 15 wt% Viton) preheated to temperatures approaching 170 C is studied experimentally in a 10.2 cm bore diameter powder gun using embedded manganin gauges. The pressure histories at various depths in the LX-04 samples and the run distances to detonation at several input shock pressures are measured and compared to those obtained in ambient temperature LX-04. An ignition and growth reactive flow model of hot LX-04 is developed to allow predictions for fragment impact scenarios which can not be tested directly.

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Prefer Standard Session